RESEARCH PROGRAM ON
Roots, Tubers and Bananas

CGIAR

CGIAR Research Program on Roots, Tubers and Bananas-RTB

Gender Strategy

Version 03

APRIL 14, 2013

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Summary

The CGIAR Research Program on Roots, Tubers and Bananas (RTB) has developed a multi-faceted gender strategy that will be woven through its research and development portfolio during the first three-year phase of the program and beyond. The strategy has been developed over several months and is based on extensive consultations with a wide range of stakeholders. The overall objective of the Program is to improve food security and reduce poverty while strengthening gender equality. For this to happen, all farmers, both men and women, must be able to benefit from science and technology interventions leading to positive development outcomes.

The RTB aims to achieve two types of gender outcomes:

Gender-responsive: both men and women benefit from RTB technologies and neither are harmed.

Gender-transformative: both men and women are helped while gender roles are transformed and more gender-equitable relationships between men and women are promoted

Recognizing the different challenges of the two types of expected outcomes, the relatively low baseline of gender research across the four Centers in RTB and current limited resources, we propose a step-wise approach to mainstream gender including the following activities:

- Including gender in targeting and priority-setting
- Identifying approaches and methods to integrate gender throughout the technical themes of the RTB
- Prioritizing gender integration research in high potential product lines
- Targeting a small number of strategic gender research initiatives where there is critical mass, key gender challenges and opportunities for going to scale
- Progressive expansion of gender integration research into other themes and product lines
- Participating in the Consortium Gender Network and developing other gender-responsive partnerships that will contribute to gender outcomes
- Identifying ways to strengthen communication and knowledge-sharing around gender issues
- Responding to the capacity-strengthening needs in gender analysis and gender-transformative methods and approaches across the RTB
- Designing gender indicators and providing monitoring support in outcome and impact assessment activities

An essential first step will be to identify specific beneficiary groups who are most likely to benefit from concentrated investment and exposure to new gender-sensitive technologies. These are likely to include:

- women producing and trading in female-dominated, marginal value chains
- women and men producing for and trading in high added-value, specialty marketing chains
- women providing unpaid family labor in production and post-harvest processing
- women owner-operators in small, semi-subsistence farms
- men and women artisanal seed producers
- women caregivers and their under 3 children

However, with the limited availability of gender-disaggregated information, the final choices will be made as more data become available. We will implement interdisciplinary, collaborative

research activities to achieve specific gender objectives for each RTB Theme:

Theme 1: To develop a gendered understanding of indigenous knowledge and practice in the conservation and use of genetic resources

Theme 2: To characterize gender-differentiated preferences for traits and their consequences, to help breeding strategies accelerate varietal development

Theme 3: To develop information and communications strategies that informs both women and men of safe pest and disease control methods

Theme 4: To improve access of men and women to quality planting material with gender-specific delivery systems where appropriate

Theme 5: To ensure that management practices and other tools that are developed have the potential to be useful for both men and women

Theme 6: To develop inclusive RTB market chains that improve gender equity in the distribution of benefits from increased commercialization

Theme 7: To ensure that both men and women participate as RTB partners and that impact is measured from a gendered perspective

Collaboration with organizations that have knowledge and experience of gender-responsive and transformative research and development will be essential to achieve these objectives.

Measurement of progress towards gender impact in the RTB Research Program will be systematic and will be an integral part of the Program-level M&E and ideally it will be undertaken at all stages of the research cycle. It will be based on the regular monitoring of a set of pre-established indicators mutually agreed with partners. Each of the four member centers of the RTB will have prime responsibility for implementing the gender M&E.

1. Rationale and Program Strategy

About 200 million poor farmers in developing countries use roots, tubers, and bananas (RTB) for food security and income. These crops are produced mainly by small farmers and play an important role in the livelihoods of many low-income and often socially-excluded groups, including women, children, youths, tribal communities, and displaced populations.

In commercial plantations, bananas are washed to remove the latex that exudes from the cut surface of the crown and any dirt or fungal spores that may be present on the fruit. This usually generates female off-farm employment

Women are often the main producers and processors of RTB crops. They can also be principal beneficiaries when they serve as elements in a strategy to diversify global food supplies, buffer against market shocks, reduce the risk of food shortages around the world, and are valued commodities in expanding markets. To ensure that women do benefit, a clear gender strategy needs to be integrated throughout this CGIAR Research Program.

Increasingly RTBs have become important as cash crops in different parts of the world, but there has been little discussion of the gendered nature of RTB production. For example, Best et al (2000) provided a global overview of roots and tuber production and a vision statement to 2020 from a CGIAR perspective, but their identification of constraints faced by producers, processors, manufacturers, and traders and consumers failed to identify the differences in the constraints faced by women and men in each of these categories. Other analysts also overlook gender as a key factor in understanding production constraints. In an overview of African food security, de Graaff, Kessler and Nibbering (2011) identify labor shortage, low soil fertility, land degradation, lack of water resources, and insufficient institutional support as key constraints, but they fail to analyse them from a gender perspective, although women are significant participants in African agriculture.

The research program will make an important contribution in delineating the participation of women in RTB production and the relative contributions of both female and male farmers. Identification of gender-related production factors will be based on a recognition that participation of women varies according to regions and even within regions. In some cases, they work on family-owned plots and have little input into decision-making; in other cases, they own plots, although their land may not be the most desirable. A study in Nigeria found that women –owned fields tended to be in the remotest areas, far removed from markets (Nweke and Enete 1999).

Important production constraints to the development of roots and tubers include declining soil fertility, insufficient and poor planting material, lack of well-adapted varieties, and pests and diseases (Scott et al 2000). All these constraints have significant gender dimensions relating to access to inputs, credit, agricultural knowledge and extension services, etc. However gender-

responsive research should not only focus on production constraints, but also include studies on improving food taste, quality, nutrition, processing, resilience, and other characteristics that are particularly important to women (Meinzen-Dick et al 2011). Often the perspectives of men and women are somewhat different on these issues. For example, rice variety research in Uttar Pradesh, India has found that while both male and female farmers placed primary importance on grain yield and duration, men were more likely to emphasize resistance to abiotic stress and adaptation to specific soil types while women were interested in taste, post-harvest quality, cooking characteristics, competitiveness for weeds, and quality and quantity of straw for animal fodder (Paris et al 2001).

Gender roles in RTB cultivation and use are often complex. For example, in Kagera, Tanzania, men are in charge of banana cultivation, while women complement household food supply from cassava and sweetpotato plots. Yet banana processing into beer is a common income-generating activity for women and the elderly. In Nigeria, cassava was traditionally a women's crop because it did well on the poor land apportioned to women. A study showed that women contribute about 50 percent to cassava production and transportation, more than 90 percent to peeling, washing and drying, and about 70 percent to packaging and marketing, while men dominate in machine operation (Koyenikan, Konkwo and Namuna n.d.). Another study of cassava production, processing and marketing in Nigeria from a gender perspective also found clear evidence of a division of responsibilities between men and women (Nweke and Enete 1999). However, as farmer access to markets improved or as better processing technologies became available, men tended to assume responsibilities for work that had previously been consigned to women. The researchers also found that more intensive land management practices and application of purchased inputs were more likely to be used on male-owned fields. Women in women-headed households had less access to government services, including extension, than women in male-headed households. Male-headed households applied more labor per unit area to their crops than did female-headed households.

Overall, women in Nigeria are in charge of small-scale processing and marketing for gari (made from cassava), with large value added and important livelihood benefits. This could change as operations are mechanized and scaled up, although at the present time the mechanized processing sector is dwarfed by small-scale production. This is a remarkable success story of women in processing in RTB crops and one upon which the research program hopes to build. The RTB will also consider the issue of gender-responsive varietal development of cassava. The need to combine pest resistance with mealiness (poundability) is a major consideration for women.

Some research has suggested that women adopt technologies more slowly than men. Researchers in Zimbabwe found that households with female labour constraints were less likely to adopt improved fallow technology (Mudhara, Hilderbrand and Nair 2003) and in Kenya they were less likely to adopt expensive technologies like inorganic fertilizer (Marenya and Barrett 2007). However a study in Malawi concluded that women farmers were quicker to adopt a new kalmia bean variety because it had qualities that they valued, such as a shorter cooking time and a good taste (Masangano and Miles 2004). Further research must be done to see if women adopt

technologies at the same rate as men, when allowances are made for the resource constraints faced by female farmers.

In an effort to address such issues in RTB production in different parts of the world, the research program has developed a multi-faceted gender strategy that will be woven through its work during the first three-year phase of the program and beyond. The strategy has been developed over several months and is based on extensive consultations with a wide range of stakeholders. Implementation of the strategy will be aided by the RTB's gender focal points and the gender research coordinator. However, in the final analysis, gender will be mainstreamed into the research program and contribute to more robust and equitable development outcomes through the actions of researchers affiliated with the four CGIAR centers and other partners. Some will find it easy to implement the ideas and suggestions in the gender strategy; others will find them less relevant or difficult to understand. Importantly however, the RTB is beginning from a position that the inclusion of gender-responsive and gender transformative research will make its work better and ultimately will lead to a better uptake of research results.

2. Consultative Processes for Gender Strategy Development

The consultative process involved seven regional stakeholder workshops attended by 100 participants from 27 different countries. Additionally, an on-line "regional" survey for national and regional partners (prepared in English, Spanish, and French) was answered by 181 people, of whom 79 had attended a workshop. A shorter survey was also conducted and some one-on-one interviews were undertaken.

Women's priorities, when analyzed separately, were quite close to those of men on most issues, but they gave greater emphasis to:

- separate monitoring of early adoption
- staffing strategies to encourage gender-responsive research
- research awards for women
- establishment of gender focal points.

Somewhat surprisingly, compared with men, women gave lower priority to the reduction of drudgery. One explanation might be that they value the extra income generated by such work.

3. Gender Goal

The overall objective of the research program is to improve food security and reduce poverty while strengthening gender equity. For this to happen, all farmers, both men and women, must be able to benefit from science and technology interventions developed by the research team and its partners. A key goal of the gender strategy is to "level the playing field" where possible by providing access to knowledge, capacity building, and market opportunities, and by ensuring that the technology developed through the program is made available to both sexes.

The RTB will aim to achieve two types of gender linked development outcomes:

- Gender-responsive: both men and women will benefit and neither will be harmed.
- Gender-transformative: both men and women are helped while gender roles are transformed and more gender-equitable relationships between men and women are promoted

The more straightforward is to achieve gender-responsive outcomes by ensuring that women are included equitably in the activities of the research program. Gender-responsive research will also analyze technologies for gender bias and address inefficiencies in aligning technologies with women's and men's needs, knowledge and skills.

It will be more challenging to achieve gender-transformative outcomes, given the structural gender inequalities in many sectors that are not easily influenced by an agricultural research program. Gender-transformative research, including both programmatic and policy approaches, challenges the distribution of resources and allocation of duties between men and women (ICRW 2010). Activities will have to address unequal gender relations to promote shared power, control of resources, decision-making, and support for women's empowerment. Because inequalities derive from multiple sectors, gender-transformative research will depend on broad partnerships, and it will take longer to achieve the desired outcomes.

4. Beneficiaries and Targeting

RTB will identify specific beneficiary groups, based on baseline studies done within different projects and crop groups. These could include:

· women producing and trading in female-dominated, marginal value chains
· women and men producing for and trading in high added-value, specialty marketing chains
· women providing unpaid family labor in production and post-harvest processing
· women owner-operators in small, semi-subsistence farms
· men and women artisanal seed producers
· women caregivers and their under 3 children

Specifically, attention will be given to those groups who are most likely to benefit from concentrated investment and exposure to new gender-sensitive technologies.

5. Gender-Responsive Integration Objectives and Activities within Research Themes

Each of the seven themes has specific gender objectives. Following the discussion of the gender dimensions of each theme, a few examples are presented of the types of potential activities to be undertaken.

Theme 1: Conserving and accessing genetic resources

Gender-Responsive Objective: To develop a gendered understanding of indigenous knowledge and practice in the conservation and use of genetic resources

Existing genetic diversity of the different RTB crops reflects, to a large extent, the cultural beliefs, livelihood needs, and practices of women and men who produce, store, and manage plant material in a wide range of agricultural systems in different parts of the world. Because of the clonal propagation of these crops, much of their conservation and use is closely tied to the domestic sphere. This is where women play a decisive role in the storage of food and seed, in food preparation, and in seed selection and preparation for planting. A gender strategy will be most relevant to outputs of this theme relating to the optimization of in-situ conservation methodologies and the increased coverage of gene pools in global gene banks.

A gendered understanding of indigenous knowledge and practice will be a key output of on-farm conservation strategies. Prain, Schneider and Widyastuti (2000) have reported the selection by New Guinea women of introduced sweeter, yellow- and orange-colored sweetpotato as baby food. It is also known that on the eastern slopes of the Andes, short-maturing chaucha cultivars of potato are planted to provide an early food supply for families. This kind of detailed information

will contribute to the characterization and documentation of native germplasm and will guide plans for repatriation of this germplasm. It will also help guide the selection of gene pools and composition of core collections in gene banks.

Potential Activities:

- Cataloguing women's seed knowledge. Women often make the final decision on selecting the best cultivars in terms of value for processing, cooking qualities and taste, and suitability for home consumption or for local marketability. To contribute to this understanding, researchers can catalogue existing knowledge systems including the criteria used by women to select the best cultivars.
- Cataloguing of traditional knowledge. Both men and women are involved in the production of crops and selecting landraces that better tolerate biotic and abiotic stresses, or which have preferred agronomic characteristics such as earliness or short or long dormancy. But they often have different types of knowledge, based on the gender division of labor. An important task will be to ensure that the knowledge of both men and women is captured and included in their databases.

Theme 2: Accelerating the development and selection of varieties with higher, more stable yield and added value

Gender-Responsive Objective: To characterize gender-differentiated preferences for traits and their consequences, in order to help breeding strategies accelerate varietal development.

The gender strategy will have an important role in identifying gender consequences of different breeding options. This will help breeders and research managers determine breeding investments, and through application of methods and tools, will help ensure the equitable distribution of benefits from new breeding products.

Female farmers have special responsibility for potato harvest in San José de Aymará, Apurímac, Peru

Specifically, the gender strategy will draw on tools and instruments developed through participatory research and gender analysis work on participatory plant breeding (e.g. Farnworth and Jiggins 2003). Greater equity in income benefits accruing to women and men from commercial crops can also have a broader positive impact on the farming system and on gender roles by offering a viable economic alternative to male migration. The departure of men to urban centers in search of work often leads to increased labor burdens on rural women and youths, and weaker rural economies (although it can also lead to enrichment of individual households that receive remittances). This theme will involve capacity strengthening among team members and local partners in gender-aware participatory plant breeding and preferred variety selection. In addition,

Women have specialized knowledge in managing seed potatoes. Himachal Pradesh, India

product line 2.1.5, which will produce guidelines, methods and catalogues, will also be strengthened from a gender perspective (see Annex 2 of the proposal for a full description of product lines).

Potential Activities:

- As part of participatory varietal selection and plant breeding, RTB can employ tools that enable adequate gendered diagnosis of end-user needs, adequate monitoring of deployment of technologies and, where necessary and possible, propose adjustments or additional actions (e.g., the promotion of women's associations to enable them to better exploit marketing opportunities of the specialty varieties generated).
- Capacity strengthening among team members and local partners can help strengthen gender-responsive participatory plant breeding and participatory varietal selection (PVS).

Theme 3: Managing priority pests and diseases

Gender-Responsive Objective: To develop information and communications strategies that inform both women and men of safe pest and disease control methods.

Women are often the principal cultivators of RTB and, consequently, are faced with dealing with pest and disease problems. The importance of particular pests and diseases and their appropriate management also vary depending on whether the main objective of the production system is household consumption or market sale. Theme 3 will factor in the role of women and the relative contribution of the different RTB crops to food security and income in determining priorities and actions.

More women are becoming directly involved in the preparation and use of pesticides, which increases health risks to themselves and their children. At the same time, there is evidence that women have greater concerns about agriculture-health linkages—both positive and negative—and are receptive to messages about integrated pest management (IPM) (Norton et al 2005). Thus there are strong arguments for the involvement of women in alternative forms of pest and disease management. Capacity strengthening in Theme 3 will pay special attention to women's needs for information and methods that can facilitate their understanding of biophysical information, which is frequently complex and unrelated to local or indigenous knowledge.

An important element of the research approach in the medium term is a gender audit of systems and regions where pests and diseases of global importance are prevalent. This would draw on specific methods focusing on gender and IPM (e.g. Vietnam National IPM Program 2011). Farmer Field Schools will continue to be used as a key philosophy and methodology for both research and farmer learning. More specifically, this theme will develop RTB-based products that lead to national programs in ecological pest management and to the development of appropriate, gender-sensitive materials for farmer training.

Potential Activities:

- Cataloguing, understanding and, where appropriate, building on existing pest and disease knowledge of local male and female farmers
- Capacity strengthening around women's needs for information and methods that can facilitate their understanding of biophysical information
- A gender audit of systems and regions where pests and diseases of global importance are prevalent.
- Gender-sensitive Farmer Field Schools for both research and farmer learning about detection, risks, ecology, and biology of pests and diseases, and about options for sustainable managment.

Theme 4: Making available low-cost, high-quality planting material for farmers

Gender-Responsive Objective: To improve access of men and women to quality planting material with gender-specific delivery systems where appropriate.

In many cases, women and men have differential access to formal and informal seed systems. An important cross-crop output for this theme will be to understand the seed needs of key end-users, including different household members, which will provide the starting point for developing more effective access to quality planting material, especially by women in poor male-headed households. This will synthesize the experience of several CGIAR centers and their partners.

For example, one of the products in product line 4.1 (see Annex 2) in its cross-cutting category, will be a socio-economic and biophysical analytical framework to diagnose bottlenecks and develop strategies to strengthen integrated or single RTB seed systems. The use of gender-sensitive approaches will ensure that they are able to differentiate between constraints faced by men and women farmers, if any. The models will become systematically more precise over the next three years.

Another product in product line 4.2 is a platform for enhanced knowledge sharing about characterizing and reaching priority farmer clients, including the poor in general and poor women specifically. Preliminary efforts will focus on the documentation and compilation of experiences with client characterization tools, client characterization and targeting approaches. Ultimately, this work will ensure that scientists, extension workers and planners have tools to more effectively target actions to benefit the poor, including poor women. Applying a gender perspective to analyze and improve seed systems will help to overcome, or at least reduce, existing biases in the access to, availability of, and use of adequate seed.

Potential Activities:

- Analysis of the cross-crop seed needs of key end-users, both men and women. This information will provide the starting point for developing more effective access to quality planting material, especially by women in poor male-headed households.
- Development of a gender sensitive biophysical and socioeconomic framework to identify bottlenecks and feed into capacity-strengthening strategies for single- and multi-crop systems. The proposed analytical tools for comparing alternative capacity-strengthening systems will also examine gender-specific delivery systems.

Theme 5: Developing tools for more productive, ecologically robust cropping systems

Gender-Responsive Objective: To ensure that crop management practices and other tools that are developed have the potential to be useful for both men and women.

A clear gender-related challenge common to both the system research programs and to RTB Theme 5 is the impact that intensification of crop management and the likely associated capital investments will have on women's role in crop production. Key questions include: will women be able to access the technology and the capital required for technology investment? And will they benefit from increased income flowing from this intensification? The gender strategy will target these issues, increasing productivity in RTB cropping systems through nutrient, water and light management practices, and by developing integrated decision and management tools for RTB crops.

As part of an ecological and physiological understanding of RTB crops and cropping systems, it will be important to pay particular attention to the gender roles in different production systems. There are also likely to be tradeoffs between cultural management of stresses and yield in relation to both men's and women's needs. Increasing productivity in RTB cropping systems through nutrient, water and light management practices will involve assessments of the likely access of women, men, and children to productivity gains in different cropping systems.

There are likely to be opportunities to develop specific gender-sensitive outcomes in this area. One of the theme's aims is to use integrated decision and management tools to identify wide recommendation domains and as the overall program begins to produce gender-disaggregated baseline information it will become possible to design gender-sensitive methodologies and tools

for scaling-up and scaling-out. Because of the uncertainties about the roll-out of this theme, two relatively modest potential activities are suggested.

Potential Activities:

- To provide a more comprehensive ecological and physiological understanding of RTB crops and cropping systems, it will be important to analyze gender roles in the different systems, e.g. the importance of small-scale mixed plantings in home gardens or food security plots away from the house and managed by women.
- The mapping exercises planned in Theme 5 can include a gendered understanding of the resources available to farmers in different systems and to ensure that women are well represented in on-farm trials to capture the "wide range of farmer conditions" required to validate technologies.

Theme 6: Promoting postharvest technologies, value chains, and market opportunities

Gender-Responsive Objective: To develop inclusive RTB market chains that improve gender equity in the distribution of benefits from increased commercialization.

A key gender-relevant dimension in this thematic area relates to developing clear and sound pathways to enhance food security and improve income generation for poverty reduction in RTB systems in which women play a major role as producers and processors. Women's access to resources and opportunities to move from subsistence agriculture to higher value chains is often much lower than men's. In addition, as market opportunities for RTB improve, there will often be a shift to large-scale production systems. This transition is important to increase overall food availability and food security, and make RTB crops cost-competitive compared to other ingredients for agro-processors. However, in such systems, there is a risk of displacing women from the production and/or marketing systems. Ongoing gender analysis and monitoring is required, with research still needed on how to ensure market development with adequate gender equity (Rubin, Nichols-Barrett, and Manfre 2010).

A gender strategy is important also for addressing the output on policies and strategies to enhance consumption of RTB. Policy development will emphasize the role of women in consumption choices and also in policy prescriptions for targeted nutrition education campaigns that work with women's groups and associations, and that can be delivered by extension services and health providers. Marketing and nutrition education efforts need to directly work with such groups.

Theme 6 will encourage public, private and farmer organizations to interact with research organizations to improve farmers' capacity to respond to new market opportunities using appropriate technologies. Again there will be good potential to ensure that the technologies developed through this interaction are gender sensitive and inclusive, offering potential for both poor and more prosperous farmers.

Potential Activities:

- Promote gender balance in RTB research-for-development teams and capacity development of core team members and local partners in gender-sensitive, value-chain research.
- Develop practical tools to foster women's participation in decision-making processes with strong emphasis on collective action initiatives, such as enterprise associations with strong participation by women.

Theme 7: Enhancing impact through partnerships

Gender-Responsive Objective: To ensure that both men and women participate as RTB partners and that impact is measured from a gendered perspective.

This theme has cross-cutting relevance for all other themes, and as part of its responsibilities for targeting and setting priorities, building effective partnerships, strengthening communication and knowledge sharing, guiding capacity-strengthening strategies, and leading work on outcome and impact assessment. Strategic gender research will be undertaken in this theme and it will

also support the integration of gender issues into the substantive, technical areas of the research program.

Theme 7 will undertake studies on the significance of RTB in combined farming systems, considering levels of poverty and vulnerability and gender-specific roles in production, processing, marketing, and consumption. Results of these studies will be shared and validated in stakeholder consultations. Priority setting within the partnership learning cycle builds continuously on evidence provided by ex-post impact assessment. In this feedback process, special attention will be given to anticipating gender-related effects and including other metrics such as Disability Adjusted Life Years for nutrition interventions.

Communication and knowledge sharing, which is one of the outputs of Theme 7, will use the gender e-platform proposed to be established throughout the CGIAR, to provide access to gender analysis tools and learning opportunities.

Outcome and impact assessment will, among other things, measure the impact of research on RTB on the livelihoods of the poor, identifying a set of outcome and impact indicators to create a plausible theory of change with stakeholders. This is linked with first order gender-disaggregated impact indicators such as technology adoption; crop yields, area, and production; changes in practices and level of inputs; changes in production costs and profitability; and changes in attitudes and risks faced by women and men farmers. As part of the gender strategy it is proposed to develop additional gender-responsive indicators, relating for example to changes in access to agricultural resources and changes in participation in production, marketing, and processing activities.

Potential Activities:

- Supporting the formulation of targets and priorities, as appropriate, for the inclusion of gender in product lines.
- Undertaking case studies to better understand constraints and opportunities for equitable access to technologies and to demonstrate that gender-responsive research is ultimately more efficient in ensuring the right research questions are examined, and in technology uptake.
- Identifying women's farmer and marketing groups and involving them as partners. NGOs with experience in gender-responsive and gender transformative work will also be identified and selected as partners.
- Developing communication and knowledge-sharing platforms that recognize that men and women often access information in different ways and that their interests are not always the same.
- Supporting capacity-strengthening activities undertaken by RTB to be gender-sensitive and representative. In some cases, efforts may be made to include more women, in order to raise their numbers to a critical mass.

Women bakers learn to process Orange Flesh Sweetpotato, Angola

6. Impact Pathways and Gender

Measurement of progress towards gender impact in RTB will be systematic and undertaken at all stages of the research cycle. It will be based on the regular monitoring of a set of pre-established indicators. These will be derived from the impact pathway for gender research in the RTB. a preliminary version of the impact pathway is shown in figure 1. This will be further developed as we get input from stakeholders and progressively engender RTB programs.

Figure 1. Schematic impact pathway for gender research in the RTB

The CGIAR's Gender and Agriculture Research Network has identified a series of guiding principles that can be used to address gender in research programs. These include:

- Priority setting based on identification of men's and women's needs for technologies through consultation with relevant stakeholder groups; gender balance in consultation process

  RTB has already had a stakeholders meeting that identified some of the key priorities for both male and female producers (and identified some differences). However, meetings with stakeholders will be an ongoing process throughout the life of the RTB Research Program. Since the Program is made up of many different projects, there is no single group of stakeholders that represents all relevant interests. In such a multi-stakeholder context, it is easy for the interests of less vocal or less dominant stakeholders (often including women) to be forgotten.

- Representation of women in beneficiaries in proportion to their representation in the population

  Some of the projects already underway in RTB do not have a proportional representation of women but to the extent possible, new projects will aim to achieve this goal. This means that researchers will ensure that women farmers are included in on-farm trials, that women entrepreneurs are included in training and other activities with processors, manufacturers and traders and that the preferences of women consumers are also solicited. In some cases it may not be possible to achieve equitable female representation but in all cases research teams should be aware of the importance of including both sexes in their work.

- Identification of factors responsible for gender disparities in adoption or impact of new technologies

  Women's economic and cultural circumstances have a direct impact on their technology choices. They may be risk-averse to adopting new technologies, especially if considerable cash outlays are required. However, if a technology has an obvious benefit, e.g. reduced cooking time means that less firewood will be required, or if an aspect of the technology relates to their role within the family, e.g. the possibility of providing them a better tasting variety, then they may be persuaded to try it. Consequently, projects in RTB will try to ensure that women participate in the evaluation, adoption and dissemination of technology. At a practical level it will be important to identify some relevant tools to achieve this end. For example, getting orange fleshed sweetpotato adopted in Western Kenya involves recognizing the role of women in agriculture, the need for women, as main producers and carers, to have access to planting material, and the identification of health centers as innovative access points.

- Gender-responsive monitoring and evaluation system in place

  RTB has developed a set of preliminary indicators that can be used by individual projects to assess their progress both in achieving gender-responsive research and in achieving gender-transformative work. These are discussed below. Monitoring will have to be regular and steps should be taken within individual projects to make necessary adjustments if they are not designed to be sufficiently gender-responsive.

Cassava starch processing near Hanoi, Vietnam

The approach will emphasize self-assessments based on the inclusion of gender-responsiveness in targeted milestones and also participatory monitoring via stakeholder meetings. Such meetings occur in most collaborative activities, and the RTB gender coordinator and focal points will provide formats for gender-responsiveness self-assessments. A good monitoring system will be established over the life of the program, beginning with a testing of the approach in the "best bet" areas of the RTB.

- Involvement of men and women in the innovation process (participation in identification and testing of promising varieties, use of indigenous knowledge, participation in and access to extension systems) through farmers groups and partner organizations, in proportion to men's and women's share of the rural population

This principle relates specifically to Theme 7. The RTB will ensure that its partners include women's organizations, recognizing that for many poor women, participation in farmers' organizations can have a transformative effect.

- Representation of women in program staff, especially where gender segregation requires female staff to work with women

Strong participation of women as program staff in the RTB is important. There is some evidence that male and female researchers are drawn to different research questions and sometimes research approaches (Meinzen-Dick et al 2011). The inclusion of significant numbers of women among the RTB research staff and in partner organizations, should lead to a wider scope in the types of research questions to be addressed.

7. Gender-Responsive and Gender Transformative Research Within RTB

Integration of Gender across the Research Cycle

Targeting and priority setting

At this early stage of the research process, a major effort will be made to ensure that, where applicable, research questions have relevance for both sexes.

Methods and gender disaggregated data collection

Research carried out in RTB includes both quantitative and qualitative techniques. At the most basic level all research projects will disaggregate results by gender and will ensure that both men and women are included in survey populations.

Both cross-cutting and thematic approaches, methods, and tools are relevant to implement the strategy. Cross-cutting approaches and methods include:

- Methods and instruments developed through participatory research and gender analysis work (e.g., Feldstein and Jiggins 1994, Fernandez 2009)
- A gender audit of systems and regions
- Gender responsive framework for identifying biophysical and socioeconomic bottlenecks and for developing capacity-strengthening strategies (e.g., Conlago et al 2009)
- Gender review of policies related to production, processing and use of RTB crops

A wide range of qualitative methods are also available for application, especially gender-responsive participatory techniques, to elicit nuanced information.

Gender Transformative Research

Even the most gender-sensitive agricultural research is unlikely to bring about immediate transformation in social relations of gender. Existing gender relations are deeply entrenched in

all societies and encompass all aspects of public and private life. However, by creating opportunities for poor women to benefit from technological interventions and by ensuring that interventions are designed to take into account, or compensate for, the production constraints faced by women, the activities envisaged by the RTB will contribute to the empowerment of women and in the long run to transformation of gender relations.

Women sieving cassava mash with IITA constructed sieves and tanks for making fufu, Nigeria

In an effort to promote gender transformative research, the RTB Program Management Unit, in conjunction with the gender focal points and the centers will seek consensus around a small number of research projects which will incorporate gender-transformative outcomes.

8. Partnerships

The RTB has a strong focus on partnerships with national research systems, farmers' organizations, NGOs, and the private sector, especially to help in delivery of new technologies developed by research. Some of these partnerships have been established for many years and have led to much useful collaboration in the past, but it will be important to avoid relying exclusively on well-established and familiar partnerships. For the most part, organizations that focus on promoting gender-equitable approaches or that have worked specifically with resource-poor female farmers have been less represented among traditional partners and the RTB will make deliberate efforts to develop relationships with organizations that have knowledge and experience of gender-responsive research and development.

9. The Monitoring and Evaluation (M&E) System and Gender

Overall, the M&E system is built on four pillars, two of which explicitly include gender considerations:

1. Program monitoring: overall supervision of program activities, especially cross-cutting elements such as gender mainstreaming, conducted by the program management.
2. Performance monitoring: against the products and milestones listed in Annex 2 of the RTB proposal, conducted by implementing partners against performance contracts.
3. Outcome and impact measurement: referring to the foreseen outcomes and related impacts, which will be managed through Theme 7 (the gender components of which are discussed above).
4. Financial and due diligence monitoring: against program budget, conducted by the Lead Center.

The RTB plans to set up an M&E system to track completion of the milestones that are indicated in the product line description tables in Annex 2 of the proposal.

Gender Mainstreaming in Projects

Effective M&E requires good indicators. This strategy proposes that the themes themselves should be responsible for developing a set of gender-responsive and gender-transformative indicators

(see Figure 1), with support from Theme 7, and that centers should be responsible for monitoring progress of the themes against the indicators. In addition, the RTB as a whole will develop gender indicators to be able to assess the extent to which it is mainstreaming gender overall into its research and its management. Meinzen-Dick et al (2011) have developed a comprehensive set of suggested indicators of gender-responsiveness in agricultural research and these may be used as a guide.

At the level of the overall program activities, indicators will be included as milestones and center management will assume responsibility for their monitoring. Centers need to pay attention to possible ameliorative actions that can be undertaken should gender milestones not be met, e.g. because it has proved difficult to find "qualified" women.

Development of appropriate gender-sensitive outcome indicators was a topic for discussion at the RTB gender workshop in December 2012. Based on input from researchers and gender experts, it should be possible to identify a core set of indicators. These indicators will be logically tied to the impact pathway and outcomes for the research program . They will also be linked to the lists of gender-sensitive potential activities discussed under the different themes.

Gender Mainstreaming in the RTB and in the Centers

Monitoring and evaluation of the success of gender mainstreaming into the RTB will also include indicators related to staffing, budgeting, partnering etc.

For example:

- Participation of women in research teams
- Participation of women in research management
- Proportion of overall budget spent on gender-responsive/gender-transformative research
- Proportion of partners with gender expertise
- Proportion of capacity-strengthening dedicated to developing gender expertise
- Proportion of women benefitting from capacity strengthening

In addition, as the performance contracts come into operation and CGIAR Research Programs are held accountable for research outcomes, gender indicators will be integrated into the M&E system. Each performance contract will include a clear M&E reporting framework that will feed into the overall program M&E set-up. Program partners and other stakeholders will be included in the M&E system to assess progress towards completion of outcomes, and particular care will be given to capturing the gender dimension of variables for monitoring. A key component of this participatory M&E process will be gender feedback. How well is progress being made in relation to gender-responsive indicators? Are midcourse corrections needed, is capacity strengthening needed to ensure that gender-related outcomes and impacts are met? The M&E system will be a crucial tool for the program director, the management committee, and stakeholders to track progress and take corrective action, and for reporting.

10. Budget

The RTB Gender Strategy involves both gender integration research and strategic gender research and includes funds for capacity strengthening to support both these types of research (Tables 1 and 2). In Section 5 we indicated a series of gender -responsive objectives which we are aiming to achieve over the next several years of the RTB program. To achieve those objectives we have allocated a 2013 budget for gender integration, strategic gender research and capacity strengthening of 9.9% of total W1, W2, W3 and bilateral funding, although this is unevenly distributed across themes. As gender becomes increasingly mainstreamed and to address some anticipated shortfall in budget to address some important gender-responsive issues (see below), we are projecting a 7% increase in the gender budget in 2014 and 2015 (Table 2).

Below are some comments on the integration and strategic gender budgets. For more information, please refer to the RTB POWB submitted to the Consortium and to the RTB Gender Workplan which is annexed to this Strategy document.

Gender integration research

The two Themes that are the core of a commodity CGIAR Research Program concern conservation of crop genetic resources and crop improvement. The role of women as conservationists of crop gene tic diversity means that gender is central to examining strategies for in situ conservation, and this area of research contributes most of the integration funds in Theme 1 (Table 1). Nevertheless, we consider that this is still underfunded, given its importance, and we expect to see this proportion rise in 2014 and 2015. Theme 2, on varietal selection and development, accounts for more than a third of the total W1+W2 budget in RTB, reflecting the importance of this area of research for a commodity Program. For 2013 all sources of funds assigned to integrating gender into research on preferences, varietal development, selection and multiplication is below the average for the Research Program, but as with Theme 1, we expect to make every effort to increase this in 2014 and 2015.

Theme 3 on managing pests and diseases allocates funds, primarily for personnel and resources committed to sex-disaggregated surveys and training events where learning is evaluated separately for women and men. These are important contributions towards understanding current knowledge and perceptions of pests and diseases and their control, but in future years we want to see a larger gender budget devoted to more equitable access to IPM technologies and safer more efficient agriculture.

In the area of seed (Theme 4), which is closely tied to varietal development, we expect to see an increase in participation by women, especially as a means of accessing income through seed enterprises. Some strategic gender research resources will be allocated to cover issues related to women's involvement in seed systems. Theme 5 on cropping systems has relatively limited funds allocated to gender integration research. Because of considerable overlap between this Theme and the Systems Programs we will review how to increase investment in the gender dimensions of cropping systems through cross-CGIAR Research Programs collaboration. During 2013 we expect to involve researchers from this area in capacity strengthening events so that the gender dimensions of cropping systems research can be examined in 2014. Theme 6 has a stong gender content, especially in finding ways for more equitable and efficient value chain development and we expect this to continue.

Strategic gender research and capacity strengthening

All of RTB's strategic gender research and capacity strengthening activities are located in Theme 7. Undertaking strategic research in 2013 is above all determined by the availability of skilled staff to carry this work out. Currently there are 13 staff with competencies in gender within RTB, which includes the RTB gender coordinator position with the newly recruited staff coming on board in May 2013. (Table 3). These staff members all have a number of responsibilities across the four Centers participating in the RTB Program as well as gender responsibilities. The RTB has secured funding for covering some of the time of the four focal point positions over three years ($720,000 for 2012-2014) and is also allocating some additional funds from W1 and W2 for 2013. This will be in addition to the $100,000 of complementary funding which was secured from RTB PMU funds in 2012 that covered finalization of the gender strategy and the organization of a workshop to discuss the gender impact pathway, debate the strategy and prepare the workplan. Working groups in the workshop identified key geographic areas for strategic and/or integration research. These will be the sites for examining key research questions of relevance for gender across the whole of the RTB program which are in the process of being identified (see Annex 1). In 2013 the total funding currently available for strategic gender research is $514,708 (Table 1).. Capacity strengthening is essential for ensuring the necessary competencies for strategic research and for forming the interdisciplinary teams that integrates gender into thematic research on RTB technologies. Strong demands from Center Focal Points, Theme Leaders and other stakeholders in RTB for gender capacity strengthening were made at a Program meeting in Ibadan in September and again during the RTB Gender, Capacity Strengthening and Knowledge Sharing Planning Workshop held in Montpellier in December. Trainings are being planned in Bangladesh, Uganda, Nigeria and in Latin America (sites to be decided) during the year and $317,591 has been made available for these events, with additional capacity strengthening resources built into integration research through 'learning by doing".

Table 1 RTB budget earmarked for gender research

Item	Gender ($ 000s)	Total ($ 000s)	Gender (%)
I Part of the RTB Themes budget earmarked for integrating gender research into the Theme's research	**3,697**	**55,186**	**6.7%**
Theme 1: Conserving & Accessing Genetic Resources	205	4,288	4.8%
Theme 2: Accelerating the development and selection of varieties with higher, more stable yields and added value	1,743	27,243	6.4%
Theme 3: Managing priority pests and diseases	314	6,197	5.1%
Theme 4: Making available low-cost, high-quality planning material for farmers	904	6,868	13.2%
Theme 5: Developing tools for more productive, ecologically robust cropping systems	122	2,987	4.1%
Theme 6: Promoting Postharvest technologies, value chains, and market opportunities	409	4,792	8.5%
Theme 8: Program Management	0	2,811	0.0%
II Budget for gender research cutting across the RTB Themes (Theme 7)	**2,159**	**7,065**	**30.6%**
1.Strategic gender research (Theme 7)	1,627		
2.Capacity strengthening on gender analysis competencies (Theme 7)	532		
III Budget for implementing gender research across the CGIAR Research Programs, as per recommendations of Gender Network	**315**		
Three-way partnerships	315	317,591	
Grand Total	**6,171**	**62,251**	**9.9%**

Table 2 Gender Research 2013 - 2015, Budget and Forecasts

Components	2013 ($ 000s)	2014 ($ 000s)	2015 ($ 000s)
I Part of the CRP's Themes budget earmarked for integrating gender research into the Theme's research	**3,697**	**3,787**	**3,880**
Theme 1: Conserving & Accessing Genetic Resources	205	216	227
Theme 2: Accelerating the development and selection of varieties with higher, more stable yields and added value	1,743	1,769	1,795
Theme 3: Managing priority pests and diseases	314	331	348
Theme 4: Making available low-cost, high-quality planning material for farmers	904	919	936
Theme 5: Developing tools for more productive, ecologically robust cropping systems	122	126	130
Theme 6: Promoting Postharvest technologies, value chains, and market opportunities	409	426	444
Theme 8: Program Management			
II Budget for gender research cutting across the CRP's Themes (Theme 7)	**2,159**	**2,230**	**2,307**
1. Strategic gender research (Theme 7)	1,627	1,677	1,732
2. Capacity strengthening on gender analysis competencies (Theme 7)	532	553	575
III Budget for implementing gender research across the CRPs, as per recommendations of Gender Network	**315**	**329**	**343**
Three-way partnerships	315	329	343
TOTAL GENDER BUDGET	6,171	6,346	6,530
TOTAL RTB BUDGET	62,251	62,251	62,251
GENDER (%)	**9.9%**	**10.2%**	**10.5%**

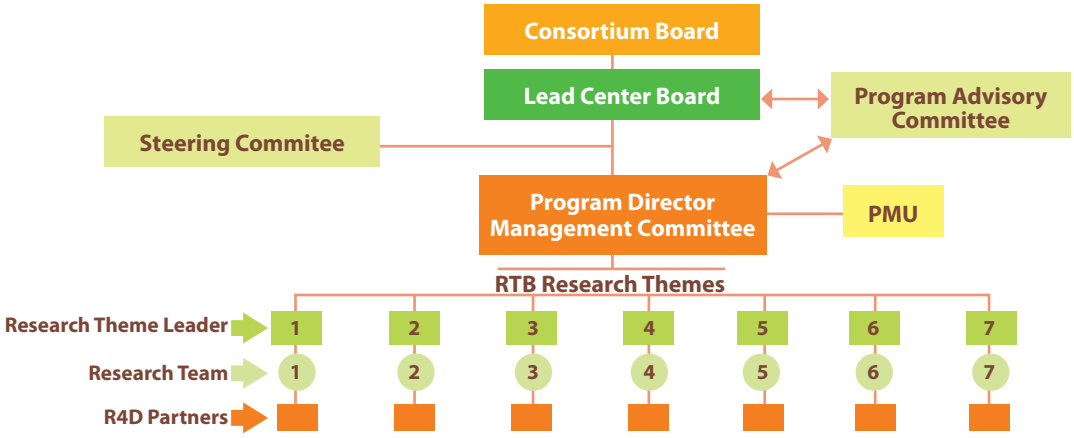
Table 3 RTB Research Staff with gender analysis competencies

	RTB Staff	Discipline	Current position/location
1	Begum, Shawkat Ara	Anthropology, Project Management	Chief of Party, USAID Horticulture Project, Bangladesh/South Asia
2	Campilan, Dindo	Sociology, Communications	Senior Food Security Specialist, Asia/SE Asia
3	David, Sonii	Anthropology, Gender advocacy	HKI and CIP-SASHA Joint Gender Specialist/Kenya
4	Heck, Simon	Social Anthropology	Deputy Program Leader, CIP-SPHI/Uganda
5	Kirscht, Holger	Anthropology	Gender Focal Point, IITA/Cameroon
6	Mayanja, Sarah	Agricultural Economics	CIP/Uganda
7	Meola, Kayte	Development Sociology	Gender Focal Point, CIAT/USA and Colombia
8	Mudege, Netsayi Noris	Social Anthropology	RTB Gender Coordinator/Peru
9	Prain, Gordon	Social Anthropology	Gender Focal Point and Science Leader, Social and Health Sciences, CIP. Co-Leader, RTB Theme 7/Peru
10	Rietveld, Anne	Social Sciences	Associate Expert , Gender Focal Point, Bioversity/E. Africa
11	Stoian, Dietmar	Socio-Economics	RTB Center Focal Point, Bioversity/Montpellier
12	Tegbaru, Amare	Social Anthropology	IITA Country Representative/ Liberia
13	Thiele, Graham	Social Anthropology	Director, RTB Research Program /Peru

11. Management System

Figure 1 shows the Governance and Management arrangements proposed in the RTB Proposal*. Gender relevance and the gender strategy has been systematically addressed and included in the terms of reference for the functioning of each of its elements. The recently renamed Program Advisory Committee has an important role in advising the CIP Board and the Steering Committee as well as the Program Director and Management Committee. It has a specific role of ensuring that gender mainstreaming occurs in the RTB program and one member of the Committee is designated as a gender specialist. The Management Committee should "Guarantee that a coherent gender strategy is articulated and successfully implemented". The Program Director will "take special responsibility for implementing the gender strategy". Similarly the RTB Theme leaders will be selected for their "commitment to gender mainstreaming" and have in their terms of reference to "work with center focal point for gender to ensure gender is adequately addressed".

Figure 1. Governance and management in the RTB



"The organizations together with the proposed M&E system should provide oversight, track progress and ensure improved gender responsiveness of RTB research."

*http://www.rtb.cgiar.org/resources/proposal-documents/final-proposal-annexes/final-proposal-annexes/crp-rtb-septemberrevision-webversion.pdf

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Annex 1

CGIAR Research Program-RTB Gender Strategy: Workplan 2013-2015

Introduction

The RTB Gender Strategy highlights the importance of understanding women and men's roles in the production, marketing and consumption of roots, tubers and bananas, since these crops are frequently in the domain of women, are crucial food security crops, but when they become more intensely commercialized, are often the preserve of men.

The workplan for implementing the strategy spreads our effort between two types of research. Strategic gender research seeks to understand key constraints and opportunities affecting the differential participation of women and men in RTB value chains and technology innovationand to seek ways for making participation more equitable and effective, leading to larger-scale development outcomes. Integrative gender research increases the gender-responsiveness of research being conducted within particular Themes and Product Lines. In order to support more effective strategic and integrative gender research, the strategy calls for strengthening both social and biophysical science capacity for gender research, through new hirings and trainings events.

Strategic Gender Research

Our approach to strategic gender research is to develop a set of over-arching research questions of systematic importance for strengthening equity and efficiency in the research efforts of the RTB program. We have identified six target sites across the major regions where there is a convergence of factors for the establishment of case study research for testing the research questions. The potential for collaboration with partners having gender competencies and/or for scaling findings from these studies Sites have been identified in South Asia, Central and East Africa, northern Colombia and Haiti. Funding has been identified for launching work in these sites. We will utilize methods drawn from several of the gender toolboxes referred to in the Strategy document. Although we are still developing the research framework, we have identified the following key issues in relation to the different research sites.

South Asia. Likely key issue: women's contrasting access to RTB-based agro-enterprises in Bangladesh and Northeast India. Two sites geographically close but culturally distant in terms of access where lessons could be learnt. Three way partnerships already in place include AAS/ Worldfish, HKI, SPRING nutrition initiative. Contacts already made with the Gender and Water Alliance for gender capacity strengthening and with University of Guelph for gender research collaboration. [See objective 6.2 in Table 1].

Central, East and West Africa. Likely key issue: Implications of intra-household resource use and decision-making for equity and innovation in different RTB crop constellations. All major RTB crops are produced and consumed in this region, but under different resource management

conditions and decision-making arrangements. Three way partnerships expected or in place with Humidtropics (two RTB gender focal points also focal points for Humidtropics), HKI, KIT. [See objective 5.3].

Northern Colombia. Likely key issue: gender implications of agro-industrialization. The transformation of artisanal production and postharvest processing of cassava to an industrial scale has critical poverty and gender implications. Potential three way partnerships with PIM, University of Florida. [See objective 6.2].

Haiti. Likely key issue: gender research in support of improved use of RTB commodities for mother and child nutrition. Urgent need for addressing highest levels of mother and child malnutrition in Western Hemisphere. Potential three way partnerships with A4NH, SPRING, HKI. [See objective 2.5)].

Gender capacity strengthening and knowledge sharing

Two RTB review and planning meetings in the last quarter of 2012 both highlighted the need for in-house capacity strengthening on gender. In the first meeting of the RTB Management Committee, Theme Leaders and Center Focal Points in Ibadan, Nigeria, the program leaders strongly expressed the need for improving gender understanding among staff of the RTB and also capacities to undertake gender-responsive research. The second meeting, held in Montpellier which brought together specialists in gender, capacity strengthening and knowledge sharing as well as the RTB leadership and representation from the Consortium Office, spent a special session to discuss capacity strengthening for gender. The group made several recommendations on approaches to capacity strengthening for gender and these will be taken on board as part of the 2013 workplan (see Workshop Report 2013 for more details). Currently four activities are included in this part of the workplan:

- Gender capacity strengthening for RTB in West and Central Africa, IITA campus
- Gender capacity strengthening in Bangladesh, for the South Asia region
- Gender capacity strengthening in Bioversity Uganda
- Gender strengthening in CIAT, Colombia

Gender Integration Research

The RTB research program has been working to integrate gender throughout the whole program. Of course, there are some Product Lines which are truly gender-neutral (example: improved methods for ex-situ conservation of RTB crops). Equally, there are some Product Lines which are strongly gender-relevant, for example those in Theme 6 on strengthening RTB value chains or consumption of RTB crops. In between, there are many PLs where gender is clearly important, but the Program is still in different stages of integrating gender into the research activities. Table 1 summarizes estimates of the proportion of the research budget that will be invested in gender during 2013. PLs where no gender-responsive activities are expected in 2013 are not included in the table, but the total "gender budget" is based on all PL expenditures.

Gender Integration Research as a percentage of Product Line Budgets

"Theme/ crop/PL"	Title	Lead org.	Lead pers.	Regions	Gender %	How are gender issues addressed	Gender deliverables
1.1.1/1.2.1	Ex-situ and in-situ conservation methodologies optimized	Bioversity	Sardos/D. Karamura	Global / East Africa, South East Asia, South Pacific Islands	40%	Gendered knowledge / Roles of men and women in Genetic Resources Management on Farm	Sex-disaggregated databases on IK and on conservation practices. Gendered national and regional on farm conservation strategies
1.4.1/1.5.1	Ex-situ and in-situ conservation methodologies optimized	CIP	Stef de Haan/ Gordon Prain	LAC 70%, SEA/Pacific 30%	40%	Roles of men and women in in-situ conservation, gendered knowledge	Sex-disaggregated databases on IK, conservation practices
1.1.2	Ex-situ and in-situ conservation methodologies optimized	IITA	Lopez-Montes	SSA	20%	Knowledge of men and women in Identification of existing methods and best practices for local knowledge management in information systems considered	Sex-disaggregated databases on LK, conservation practices
1.6.1	Ex-situ and in-situ conservation methodologies optimised: yams	IITA	Lopez-Montes	West Africa	20%	Interests of men and women considered in the development of an on-farm conservation strategy for yams. Different agroecological knowledge of men and women considered to complement in-situ and ex-situ conservation strategies	Gender-sensitive yams conservation strategies
2.2.4/2.2.4	Variety development	Bioversity	Van den Berg/D. Karamura	Global/East Africa	20%	Varietal selection based on men and women's choices	Cultivars catalogue
2.2.5/2.2.5	Aligning research with farmers' and end-users' priorities	Bioversity	Molina/Karamura/Dita	Asia/East Africa/Latin America	10%	Promoting the use of improved banana hybrids and popular local varieties across regions by involving Men and Women farmers groups in the selection process.	Catalogue of sex-disaggregated preferences for traits
2.3.4	Variety development	CIAT	C. Meola	Haiti	15%	Household surveys of acceptability of yellow cassava (high Vit. A)	Sex-disaggregated databases on consumer acceptance of yellow cassava
2.3.4	Variety development	CIAT	C. Meola	LAC (50%); Asia (50%)	5%	Preliminary planning for studies on	Proposal for studies on impact on women for extended shelf-life in different markets
2.3.5	Aligning research with farmers' and end-users' priorities	CIAT	C. Meola	LAC (20%); Asia (80%)	20%	Household surveys of acceptability of herbicide tolerant cassava and implications for	Analysis of expected impact of herbicide-tolerant cassava on women's livelihoods and health
2.3.5	Aligning research with farmers' and end-users' priorities	CIAT	C. Meola	Bolivar Dept., Colombia	20%	Farmer surveys of acceptability of changes in varieties and management practices to extend harvest period for industrial markets	Analysis of gender implications of shift to industrial markets for cassava
"2.1.4/2.4.4/ 2.5.4"	Variety development	CIP		Global	10%	Participatory varietal selection based on men and women's choices	Variety development reports
"2.1.5/2.4.5/ 2.5.5"	Aligning research with farmers' and end-users' priorities	CIP	Stef de Haan/ Gordon Prain	Global	25%	Understanding men and women's preferences for varietal traits Involvement of women as multipliers and disseminators of planting material of new varieties	Catalogue of sex-disaggregated preferences for traits
"2.2.4/2.3.4/ 2.6.4"	Variety development	IITA	Swennen, Kulakow, Parkes, Ntawuruhunga, Kanju, Mahungu, Lopez-Montes	Global	10%	Participatory varietal selection based on men and women's choices	Variety development reports
2.3.3	Population development and pre-breeding: cassava	IITA	Ntawuruhunga,	SSA	15%	Demands of men and women considered in multi-location testing of drought tolerant/stay-green cassava genotypes, in Nigeria and Malawi	Recommendations about sex-disaggregated needs in drought-tolerant cassava varieties

2.3.5	Aligning research with farmers' and end-users' priorities : cassava	IITA	Kirscht/Kulakow/Maziya Dixon	SSA	50%	Gender-sensitive methods developed to increase adoption of new varieties based in participatory breeding approaches in areas where cassava is primarily a food security crop	Improvement of methodologies in participatory research with a particular emphasis on gender issues. Varieties developed better fit the needs and expectation of women and farmers
2.6.5	Aligning research with farmers' and end-users' priorities : yams	IITA	Lopez Montes/Kirscht	WA	20%	Gender aspects considered in Yam value chain and communication and marketing strategies developed in major yam growing countries	Yams value chain and communication and marketing strategy considering needs of men and women
3.2.4/4.2.3	Management of BXW in banana gardens and planting material	Bioversity	Karamura	East Africa	15%	Differences by gender of knowledge of and use of practices for managing BXW	Summary of studies to date on BXW knowledge and management by gender and strategy for including gender in future studies
3.2.4/4.2.3	Management of BBTV in banana gardens and planting material	Bioversity	Lepoint	East and Central Africa	15%	Differences by gender of knowledge of and use of practices for managing BBTD	Summary of studies to date on BBTD knowledge and management by gender and strategy for including gender in future studies
3.3.3	Ecology and management of beneficial organisms	CIAT	Kris Wychklus	SE Asia	10%	Inclusion of gender in analaysis of pest control options, in consultation with gender specialist	Proposal for studies on women's roles in managing pests and diseases in the region
3.4.4/3.5.4	Specific management strategies	CIP	Thomas Miethbauer/ Veronica Cañedo	Global	30%	Sex-disaggregated surveys of IPM knowledge and practices Training an men and women with sex-disaggregated evaluations on learning	Sex-disaggregated databases on IPM knowledge and practices
4.2.3	Selection of superior mother plants as a source of suckers for improving plantain yields	Bioversity	Staver/Dita	West Africa and Latin America	15%	Understanding the role of women in household management of planting material and other practices	Summary of role of women in clonal selection for cultivar improvement
4.3.3	Farmer-based quality seed production and management methods	CIAT	R. Escobar	Cauca, Colombia	20%	Household surveys of women's roles in clean seed production using farm-level in vitro techniques	Analysis of expected impact of proactively incorporating women into clean seed production process
"4.1.1/ 4.4.1/4.5.1"	Policies, strategies, and decision support tools to improve effectiveness of seed systems	CIP		"LAC (2 countries) SSA (3 countries) Asia (3 countries)"	10%	Understand the role of men and women in different strategies for multiplication and distribution of high quality seed	Report
"4.1.3/4.4.3/ 4.5.3"	Farmer-based quality seed production and management methods	CIP		LAC, SSA, Asia	25%	Sex-disaggregated analysis of the benefits and feasibility of positive selection of potato seed Assessment of the role of women and men in community-based strategies for production of healthy planting materials	Reports
4.3.1	Policies, strategies, and decision support to improve effectiveness of seed systems: cassava	IITA	Kirscht/ Parkes/Yomeni, Ntawuruhunga	DR Congo, Nigeria, Sierra Leone, Tanzania, Zambia	50%	Gender research conducted during the distribution of Vitamin A cassava varieties in Nigeria to better understand adoption and farmers' perceptions, choices and priorities for cassava varieties and how to enable women to participate in seed systems	Recommendations about sex disaggregated requirements for desired cassava varieties and inclusion of women in seed producer networks
4.3.3	Demonstrations, multiplication, training and dissemination to increase adoption of improve cassava varieties and support farmers including women and youth to increase cassava productivity in Nigeria	IITA	Okechukwu	Nigeria	15%	Training of farmers, youth and women on sustainable cassava cultivation lead to access of agricultural extension workers, lead farmers and vulnerable groups in Nigeria to improved cassava planting material and sustainable production technolgies.	Training sessions documented and training materials available.
5.2.2	Improving plantain and banana production in mixed food crop systems	Bioversity	Staver/Lepoint	sub saharan Africa	5%	In mixed cropping system what are the diverse interests in the different crops in the mixture	Data base on the roles of household members in growing and using the different crops in a mixed food crop with plantain field

5.2.3	Understanding technology choice for banana agroecological intensification among poor households	Bioversity	Staver/Rietveld	East Africa and Latin America	10%	Roles by gender in the choice of new technologies in poor banana-growing households	Gender-disaggregated data on resource control, including land and labor, in technology choice
5.3.1	Ecological and physiological understanding of RTB crops and cropping systems	CIAT Clayuca	H. Ceballos B. Ospina	LAC	5%	Household survey of changes in men's and women's roles in crop management	Gender-disaggregated assessment of labor-saving crop management practices
6.2.3	Group marketing of bananas	Bioversity	Rietveld	East Africa	5%	Role of women in group marketing successes and failures	Review of experiencies with group marketing of banana and the role of women in group formation and governance
6.3.2	Improving linkages to markets for environmentally friendly income generation activities	CIAT	Keith Fahrney	SE Asia	10%	Household surveys of women's roles in production, processing and market access for systems under rapid change in Vietnam and Cambodia	Analysis of gender implications of accessing various new markets, e.g. starch, animal feed, dried chips for farmers with limited market access
6.4.1/6.5.1	Postharvest approaches to improve food security	CIP		LAC, SSA	30%	Consumption studies and nutritional profiles of women and young children in the Andes Participation of women and men in new market chains for SP processed products	Reports, sex-disaggregated databases
6.4.2/6.5.2	Improving linkages to markets for environmentally friendly income generation activities	CIP		LAC	50%	Sex-disaggregated assessment of biofortified potato varieties as new niche product Gender-based constraints analysis on new enterprise development	Sex-disaggregated database, reports
6.4.3/6.5.3	Marketing strategies and policies to add value and promote RTB consumption	CIP		LAC, SSA	60%	Gender-responsive promotional tools developed for increasing awareness of nutritional and income-generating value of potato products Gender-responsive strategies developed for stimulated urban demand for SP products Sex-disaggregated surveys on consumer perceptions about OFSP Gender-responsive social marketing campaigns designed and implemented to promote use of OFSP Methods for gender-equitable stakeholder platforms developed to support production and marketing innovation processes among low-income households	Gender-responsive promotional materials for potato Reports Sex-disaggregated databases Social marketing campaign materials for OFSP
7.1.1	Targeting and setting priorities	Bioversity	Pemsl	Global	30%	Databases and procedures for updating data on RTB crops disaggregated by gender relevance Significance of RTB in combined farming systems and gender-specific roles and functions characterized from production to consumption Gendered understanding of desirable traits for new RTB crops	Sex-disaggregated databases, reports
7.1.5	Impact of Bioversity banana programs	Bioversity	Gotor	Global	2500%	Gender-differentiated analysis of the modus operandi and impacts of Bioversity banana programs	Gender-differentiated impacts of Bioversity banana programs identified
7.1.2	Building effective partnerships	CIAT	C. Meola		100%	Identify key institutions/gender researchers that could expand the potential for up-scaling gender analysis in RTB	Establish partnerships with 1-2 academic institutions
7.1.4	Capacity strengthening	CIAT	C. Meola	Bolivar Dept., Colombia	10%	Training of students at Universidad de Cordoba, Colombia in gender surveys and analysis	4-5 undergraduate students trained in survey development and gender-inclusive analysis
7.1.4	Capacity strengthening	CIAT	C. Meola	LAC	100%	Training of research staff on gender mainstreaming (in collaboration with other RTB centers)	Gender Workshop
7.1.4	Capacity strengthening	CIAT	C. Meola	LAC	100%	Compiling extant gender analysis tools. Training of research staff on gender mainstreaming (in collaboration with other RTB centers)	Training manual/Gender "toolbox"

7.1.1	Targeting and setting priorities	CIP	Guy Hareau/ Ulrich Klein-wechter	Global	30%	Databases and procedures for updating data on RTB crops disaggregated by gender relevance Significance of RTB in combined farming systems and gender-specific roles and functions characterized from production to consumption Gendered understanding of desirable traits for new RTB crops	Sex-disaggregated databases, reports
7.1.2	Building effective partnerships	CIP	Gordon Prain	Global	40%	Research on partnerships identifies gender capacity and needs of different partners Other gender contributions indicated as part of strategic gender research and capacity strengthening	Reports
7.1.3	Communication and knowledge sharing	CIP	Veronique Durroux	Global	20%	Gender-sensitive communications and knowledge-sharing materials	Communications and knowledge-sharing materials
7.1.4	Capacity strenthening	CIP	"Philippe Monneveux/ Gordon Prain"	Global	50%	Gender contributions indicated as part of strategic gender research and capacity strengthening	
7.1.5	Outcome and impact assessment	CIP	Ulrich Klein-wechter/Guy Hareau	Global	15%	Shared impact assessment methodology developed for understanding gender impacts Ex-post impact assessment of adoption of SP varieties in Rwanda and Uganda, showing gender impacts	Methodology document Sex-disaggregated databases, reports
7.1.1	Targeting and setting priorities	IITA	Kirscht, Rusike, Abdulahi	Global	20%	Databases and procedures for updating data on RTB crops disaggregated by gender relevance Significance of RTB in combined farming systems and gender-specific roles and functions characterized from production to consumption Gendered understanding of desirable traits for new RTB crops	Sex-disaggregated databases, reports and research priorities
7.1.2	Building effective partnerships	IITA	Kirscht	Global	100%	Gender workplan is developed and three strategic gender research sites are identified including research scoping exercises.	Gender mainstreaming strategy is developed and implemented in the RTB program
7.1.3	Communication and knowledge sharing	IITA	Zoumana Bamba	Global	30%	Gender-sensitive communications and knowledge-sharing materials	Communications and knowledge-sharing materials
7.1.4	Capacity strengthening	IITA	Zoumana Bamba/ Kirscht	Global	30%	Workshop curricula are developed to strengthen gender capacities amongst centres and partner institutions	Gender Workshop curricula
7.1.3	Travel grant for symposium participation	All		Global	25%	Travel grant will encourage female scientists to apply and will give priority to female presenters	Women scientists have increased opportunity to attend scientific RTB symposia and present their work
7.1.4	Capacity strengthening needs assessment	All	Simone Staiger	Global	25%	During the assessment of CS needs, special attention will be given to needs of women scientists, and training programs will specifically address gender issues in RTB research	Women scientists have access to CS activities; Training programs specifically address gender issues in RTB research
7.1.4	Capacity strengthening on gender for RTB staff	All	Simone Staiger	Global	100%	A specialized training on "gender in agricultural research" will be organised for key RTB staff	RTB scientists are trained to plan and implement gender-responsive RTB research
Total gender allocation for RTB							

A broad alliance of research-for-development stakeholders & partners